

REMARKS/ARGUMENTS

Claims 1-6 have been canceled. New Claims 8-18 are active in the case.

Reconsideration is respectfully requested.

The present invention relates to a method of producing light hydrocarbons.

Claim Amendments

New Claims 7-9 correspond to original Claims 1-3. All of the claims are now directed to a method of producing light hydrocarbons. This language is supported by the disclosure of the specification at page 3, last five lines of the text. Other minor improvements in language have been made to Claim 1. Further, new Claims 10, 12, 14 and 16-18 find basis in the specification at page 5, last paragraph and lines 12-14; page 6, last full paragraph; page 4, last full paragraph; the paragraph bridging pages 19 and 20 and page 5, lines 10-11 of the text. The remaining new claims are supported by original claims. No new matter has been introduced into the claims. Entry of the amendments and new claims is respectfully requested.

Claim Rejection, 35 USC 103

Claims 1-6 stand rejected based on 35 USC 103(a) as obvious over JP 11-180902 in view of Miller et al, U. S. Patent 4,340,465. This ground of rejection is respectfully traversed.

The cited '902 reference is germane to the present invention, because it is directed to a method of catalytically cracking hydrocarbon feed materials over a catalyst of a rare earth element supported on a zeolite. A preferred catalyst support is either ZSM-5 or ZSM-11. Further, the reference in paragraph [0009] discloses that the catalyst may be placed in a reactor. Two specific types mentioned are a fixed bed reactor or a fluid bed reactor. It also discloses in the same paragraph the hydrocarbon feed material may be diluted with a gas

which includes steam. However, there is no disclosure of a system which achieves the regeneration of the catalyst in the production of ethylene and propylene light gases. Further, there is no teaching or suggestion of the three reactor types to which the present process is limited which are a fluidized bed reactor, a moving bed reactor and a transfer line reactor. Accordingly, the '902 reference does not show or suggest the present process as claimed.

The Miller et al patent also describes the catalytic cracking of a hydrocarbonaceous feedstock such as mixtures of aromatic compounds with aliphatic compounds, gas oils, vacuum residues and synthetic fuels over a catalyst of alumina-free and aluminosilicate catalysts to light hydrocarbon products. However, there is no teaching or suggestion of a reactor which is capable of continuously regenerating the catalyst therein and which is one of the three types of reactors recited in the present claims.

Another distinguishing feature is that whereas the hydrocarbon feed of the process of the patent contains significant amounts of aromatics, such is not the type of feed employed in the present process. Moreover, another important aspect of the present process is the use of steam in the atmosphere within the reactor. The use of steam, however, is not taught by the patent and Example 1 of the patent discloses a fixed bed reactor, which is not a fluidized bed reactor as used in the present process. Accordingly, the combined documents do not suggest the present invention as claimed and withdrawal of the rejection is respectfully requested.

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It is believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.


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